



Australian Bureau of Statistics

6523.0 - Income Distribution, Australia, 1999-2000

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Summary

Main Features

SUMMARY OF FINDINGS

The 2000-01 issue of this publication was released on 23 July 2003, renamed **6523.0 Household Income and Income Distribution, Australia, 2000-01**. The 2000-01 issue incorporated a range of methodological improvements in household income distribution measurement and presentation. Estimates for 1994-95 to 1999-2000 were also revised at that time. The changes have been made in response to revised user requirements, developments in international theory and practice, and an observed increase in undercoverage of government cash transfers payments measured in the SIHC in recent years. Users are advised that the changes incorporated in the 2000-01 issue may have an impact on the analysis of data taken from earlier issues. More details about these changes are available from **6523.0 Household Income and Income Distribution, Australia, 2000-01 - Explanatory Notes**.

INTRODUCTION

The economic well-being of individuals largely reflects the amount of income that they receive directly, the extent to which they share it with others, and the extent to which others share income with them. This publication presents information about the income received by income units. Income units have been chosen as the counting unit on the basis that income sharing will normally take place between partners in a couple family and between parents and dependent children, but is likely to be much more limited between other individuals and groupings of individuals.

The measure of income used in this publication is restricted to cash income, and most of the statistics presented relate to gross income, that is, before any deduction for income tax and the Medicare levy. Gross cash income is defined here as regular and recurring cash receipts from wages and salaries, profit/loss from own unincorporated business, property income in the form of interest, rent and dividends, private transfers in the form of superannuation and child support, and cash transfers from government pensions and allowances.

In addition, some statistics relating to disposable income and equivalent disposable income are provided to show the impact of adjusting gross income to better reflect the economic well-being of members of the income unit. Disposable income is derived by the deduction of income tax and the Medicare levy from gross income, since that part of an income unit's gross income is not available to the income unit to spend or save. Estimates of equivalent income are estimates of disposable income that have been standardised according to the number of people comprising the income unit since, compared to a smaller income unit, a larger income unit will normally need more income to achieve the same level of economic

well-being for each of its members. Appendix 2 provides details of how equivalent income is estimated.

CHANGES IN GROSS INCOME, 1997-98 TO 1999-2000

From 1997-98 to 1999-2000, the mean (average) gross weekly income for all income units in private dwellings increased by 10% from \$658 to \$726. The mean weekly income of the largest group of income units, those who were mainly dependent on wage and salary income, increased by 8% from \$888 to \$961. This is consistent with the increase of almost 8% in average weekly earnings over the same period (see ABS 6302.0). The mean income for those mainly relying on government cash benefits increased by 4% over the period, while average incomes for units mainly dependent on their own businesses increased by 13%. Average income of those mainly dependent on other income sources (including interest, rent, dividends and superannuation) increased by 14%.

MEAN GROSS WEEKLY INCOME, By Principal Source For All Income Units(a)

	1994-95	1995-96	1996-97	1997-98	1999-00
Principal source of income	\$	\$	\$	\$	\$
Wages and salaries	801	816	844	888	961
Own business	850	916	908	956	1,085
Government cash benefits	231	238	254	256	267
Other income	420	432	507	546	622
Mean gross weekly income	596	609	625	658	726

(a) The survey was not conducted in 1998-99.

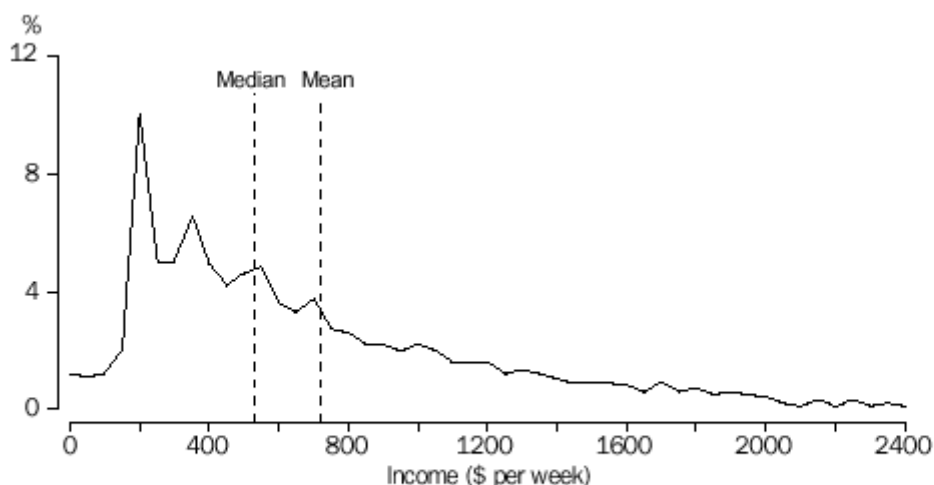
INCOME DISTRIBUTION

A number of methods can be used to indicate the degree of income inequality, as discussed in Appendix 1. The methods can be applied to both gross cash income and the alternative measures of income.

Gross cash income

In 1999-2000 there were approximately nine million income units living in private dwellings in Australia. While their mean gross weekly cash income was \$726, the median (i.e. the midpoint when all units are ranked in ascending order of income) was considerably lower at \$535 (table 1). This difference reflects the typically asymmetric distribution of income where a large number of units in the population have relatively low incomes and a smaller number of units have relatively very high incomes, as illustrated in the frequency distribution graph.

DISTRIBUTION OF GROSS WEEKLY INCOME OF ALL INCOME UNITS



Note: In this graph income is presented in \$50 ranges.

One measure of the degree of income inequality between income units is given by the income share of each income quintile. In 1999-2000, the lowest income quintile received only 3.8% of the total gross income of all income units, whereas the highest quintile received 48.5%. The income shares in 1999-2000 were virtually unchanged from the shares in 1997-98, and there has not been any significant change in them in the period since 1994-95.

The Gini coefficient is a single statistic which summarises the degree of inequality and it also has not changed significantly since 1994-95.

PERCENTAGE INCOME SHARE FOR INCOME QUINTILES

Gross weekly income quintile	1994-95	1995-96	1996-97	1997-98	1999-00
Lowest	3.6	3.8	3.9	3.8	3.8
Second	9.3	9.1	9.4	9.0	9.0
Third	15.2	15.0	15.2	15.0	15.0
Fourth	24.0	23.7	24.0	23.9	23.8
Highest	47.9	48.3	47.5	48.3	48.5
All income units	100.0	100.0	100.0	100.0	100.0
Gini coefficient	0.443	0.444	0.437	0.446	0.448

Alternative measures of income

The analysis of income distribution above is based on gross income and takes no account of the redistributive impact of the income tax system or differences in the composition of income units. Disposable income is derived by deducting an estimate of personal income tax and Medicare levy payments from each income unit's gross cash income. Disposable income can then be adjusted to reflect differences in the composition of income units by applying equivalence scales, as discussed in Appendix 2.

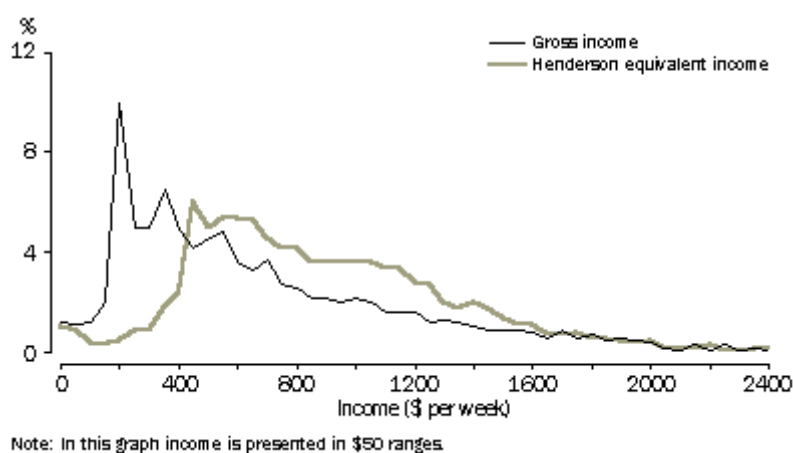
PERCENTAGE INCOME SHARE FOR INCOME QUINTILES - ALTERNATIVE MEASURES

Income quintile	Gross weekly income	Disposable income	Henderson Equivalent	OECD Equivalent
Lowest	3.8	4.7	7.1	6.7
Second	9.0	10.8	12.8	11.6
Third	15.0	16.2	17.7	16.9
Fourth	23.8	24.0	23.8	24.1
Highest	48.5	44.3	38.5	40.7
All income units	100.0	100.0	100.0	100.0
Gini coefficient	0.448	0.396	0.317	0.346

After the adjustments, the measures of income inequality are reduced somewhat. The share of disposable income received by the lowest income quintile is 4.7%, compared to 3.8% for gross income. The impact of applying equivalence scales is greater, although the extent of the difference depends on the equivalence scale chosen. Of the two equivalent incomes shown here, Henderson equivalent income reflects the greatest adjustment. The ratio of the income share of the highest income quintile to the income share of the lowest is 5.4, compared to 12.8 for gross income. Similarly, the Gini coefficient for Henderson equivalent income is 0.317, which is 29% lower than the coefficient of 0.448 for gross income.

The impact of the adjustments can also be illustrated by comparing the relevant frequency distributions. Compared to the frequency distribution of gross income, the distribution of Henderson equivalent income is significantly less asymmetrical.

DISTRIBUTION OF GROSS AND HENDERSON EQUIVALENT INCOME



While the alternative measures show a significant difference in the extent of inequality in the income distribution when compared to gross income, they give the same picture of no significant change in the level of inequality in the period since 1994-95.

LIFE-CYCLE STAGES

To examine differences in income for families in varying circumstances, it is useful to compare income unit income at different life-cycle stages. A typical life cycle covers early adulthood and the forming and maturing of families. A simplified view of life-cycle possibilities is provided in table 25.

Levels of income are related to life-cycle stages. Income tends to rise as young people enter

relationships and often have two earners in the income unit. The birth of children and the early years of child rearing are associated with reduced labour force participation of parents, particularly the mother, and resultant lower incomes. Income rises again when women return to paid employment as the children grow older. In subsequent stages of the life cycle, as children become independent and parents age and leave the labour force, income again declines. These differing stages of the life cycle, and the average incomes received by different units, are discussed below. It should be noted that the age of a couple is defined as the age of the reference person of the couple. Perhaps the most interesting of these life cycle groups are single youth and older income units because both are about to or have gone through a major life cycle transition, namely to employment and retirement respectively.

INCOME AND CHARACTERISTICS OF LIFE-CYCLE GROUPS

Type of income unit	Mean gross weekly income	Gini coefficient(a)	Income unit members	Income earners(b)
	\$		no.	no.
One person, under 25 years	374	0.362	1.0	0.8
One person, 25-35 years	600	0.348	1.0	0.8
Couple only, reference person under 35 years	1,327	0.275	2.0	1.8
Couple with dependants, eldest under 5 years	1,030	0.328	3.4	1.3
Couple with dependants, eldest 5 or more years	1,202	0.339	4.1	1.5
One parent	509	0.303	2.7	0.5
Couple only, reference person 55-64 years	840	0.405	2.0	1.0
One person, 55-64 years	453	0.523	1.0	0.4
Couple only, reference person 65 years and over	526	0.384	2.0	0.2
One person, 65 years and over	284	0.333	1.0	0.0

(a) The Gini coefficient (see Appendix 1) within this group of the population.

(b) Average number of persons who receive income from wages or salaries or are engaged in their own business or are silent partners in a business or partnership.

It should be noted that, with one exception, the Gini coefficient for each group is less than the Gini coefficient for all income units (0.448), reflecting the generally higher homogeneity of individual life cycle groups.

Single youth

When young people move out of full-time education or leave the parental home, they are classified in the income survey as one person income units, as they are considered to be financially independent of their parents. In 1999-2000 there were approximately 1.3 million one person income units under the age of 25 years and these units had a mean weekly income of \$374 (table 21). The relatively high Gini coefficient for this group (0.362) reflects the wide range of incomes received resulting, partly, from the differing attachment to the labour force of young people making the transition from full-time education to full-time work.

The mean weekly income for single people in the slightly older age group of 25-34 years

was \$600 in 1999-2000 which was higher than that of their younger counterparts (\$374). This reflects the higher employment rate and the higher level of salary for the older group.

Early retirement years

For most couples and sole parents, the need to financially support dependent children has ended by the time they reach their mid-fifties. In 1999-2000, only 10% of income units with the reference person in early retirement age (55-64 years) had dependent children present (table 4).

For couples in the 55-64 year age group, the mean weekly income in 1999-2000 was \$869 compared to the peak average income of \$1,287 for those aged 45-54 (table 11). For one person income units, mean weekly income was \$453 compared to \$506 for those aged 45-54 (table 21).

The lower average income reflects the lower labour force participation. In 1999-2000, approximately one-third of couples aged 55-64 had neither partner employed. Just over half (53%) were receiving the majority of their incomes from wages and salaries and a quarter were mainly dependent on government cash benefits (table 11). Government cash benefits were the main source of income for 50% of one person units in this age group (table 21).

Older income units

The considerably lower incomes that accompany retirement are evident in the average incomes of older income units, that is, those aged 65 years or over. In 1999-2000, the average weekly income was \$284 for older one person units (table 21) and \$533 for older couples (table 11). A high proportion (75%) of older income units were primarily dependent on government cash benefits for their income (table 4).

The income distribution of older one person units was very concentrated, with 40% having average weekly income in the range \$160-\$199 in 1999-2000 (table 21). This concentration is associated with the large proportion (80%) of older one person units that were dependent on government cash benefits.

The distribution of income among older couples covered a wider range than that for older one person units, reflecting couples' slightly more diverse sources of income. Sixty-eight per cent of older couples were mainly dependent on government cash pensions for their weekly income, 23% were mainly dependent on superannuation and property income, and approximately 8% on earned income (table 11). However, despite this relative diversity in income sources, approximately 62% of older couples had income in the fairly narrow range of \$300-\$499 per week (table 11).

EXPLANATORY NOTES

INTRODUCTION

1 This publication presents results from the 1999-2000 Survey of Income and Housing Costs (SIHC). The survey collected information on sources of income, amounts received and characteristics of income units and persons resident in private dwellings throughout Australia.

2 The SIHC has been conducted in each year since 1994-95, except for 1998-99. However,

income data were collected in the 1998-99 Household Expenditure Survey and included in publications from that survey. The next SIHC will be conducted in 2000-01.

3 Previous surveys of income were conducted by the Australian Bureau of Statistics (ABS) in 1990, 1986, 1982 and 1979. These surveys were generally conducted over a two-month period, compared to a twelve month period for the SIHC. Other differences between the SIHC and income surveys conducted previously include improvements to the survey weighting and estimation procedures, changes to the population in scope and changes to interviewing methods.

CONCEPTS AND DEFINITIONS

4 The concepts and definitions relating to statistics of income are described in the following section. Other definitions are included in the glossary.

Income unit

5 The income unit is the basic unit of analysis in the income survey. It is defined as that group of persons within a household whose command over income is assumed to be shared.

6 For the purposes of the income unit definition, income sharing is considered to take place within married (registered or de facto) couples, and between parents and dependent children.

7 In this publication, income units are classified as:

- couple income units-married (registered or de facto) couples and dependent children, if any;
- one parent income units-a parent and dependent children only; and
- one person income units-single people including non-dependent children living with their parents.

8 Other characteristics of income units are based on personal characteristics of income unit members, such as age and labour force status, as well as the presence of children and housing tenure.

Income

9 Income refers to regular and recurring cash receipts from employment, investments and transfers from government, private institutions and other households. Gross income is the sum of the income from all these sources before income tax and the Medicare levy have been deducted. This differs from the household income definition used in the Australian System of National Accounts (ASNA). A detailed comparison of 1997-98 SIHC and ASNA estimates was published as an appendix to the 1997-98 issue of this publication. Comparison of 1999-2000 SIHC and ASNA data indicates that the relationship between the two estimates has not changed significantly since 1997-98, with both measures of income growing in aggregate by 10%.

10 Sources from which income may be received include:

- wages and salaries (whether from an employer or own corporate enterprise);
- profit/loss from own unincorporated business (including partnerships);

- property income (interest, rent, dividends, royalties);
- government cash transfers (pensions, allowances, benefits); and
- private cash transfers (e.g. superannuation, regular workers' compensation, income from annuities and child support).

11 Receipts which are excluded from income because they are not regular or recurring cash payments include the following:

- income in kind including employee benefits such as the provision of a house or a car;
- employer contributions to pension and superannuation funds;
- capital transfers such as inheritances and legacies, maturity payments on life insurance policies, lump sum compensation for injuries or other damage; and
- capital gains and losses.

Weekly income

12 Income is collected using a number of different reporting periods, such as the last financial year for own business and property income, and usual pay close to time of interview for wages and salaries and other sources of private income. The income is divided by the number of weeks in the reporting period. Estimates therefore do not refer to a given week within 1999-2000.

Equivalent income

13 Disposable (gross income less personal income tax and the Medicare levy) income can be adjusted by the application of equivalence scales to facilitate comparison of income levels across income unit types. Equivalence scales are sets of ratios which show the relative income levels required for income units of different sizes and composition to maintain a similar standard of living. For more information on equivalence scales see Appendix 2.

SURVEY METHODOLOGY

Scope

14 The survey collects information by personal interview from usual residents of private dwellings in urban and rural areas of Australia. Private dwellings are houses, flats, home units, caravans, garages, tents and other structures that are used as places of residence at the time of interview. Long-stay caravan parks are also included. These are distinct from special dwellings which include hotels, boarding schools, boarding houses and institutions. Residents of special dwellings are excluded.

15 The survey also excludes households which contain members of non-Australian defence forces stationed in Australia and diplomatic personnel of overseas governments.

16 Also excluded are persons living in remote and sparsely settled areas of the Northern Territory. Approximately 20% of the population in the Northern Territory live in such areas.

SURVEY DESIGN AND ESTIMATION

Sample design

17 The sample for the income survey is a sub-sample of private dwellings included in the ABS Monthly Population Survey (MPS). The MPS is a multistage sample of private dwellings and a list sample of other dwellings.

18 The sample is suitable for producing reliable estimates at the Australian level for income of residents in private dwellings, classified by different population groups based on income unit composition (such as couples with children), levels and sources of income. Estimates at the State and Territory level for broad aggregates are generally reliable although some estimates for Tasmania, the Northern Territory and the Australian Capital Territory should be used with caution (see Appendix 3).

19 Each month a sample of approximately 650 dwellings is selected for the income survey from the responding households in the MPS. Over the year, this results in approximately 15,500 persons over the age of 15 being included in the sample and of these, about 85% respond.

Fully non-responding households

20 Not all of the households selected in the sample contribute income information to the estimates. Such households include:

- those affected by death or illness of a household member; and
- those in which more than half of the persons over 15 in the household did not respond either because they could not be contacted, had language problems or refused to participate.

Partial response and imputation

21 Partial response occurs when:

- some items of data in a schedule are missing because a person is unable or unwilling to provide the data; or
- for a household, not every person over 15 residing in the household responds but at least half of these persons provide data.

22 In the first case above, the data provided are retained and the missing data imputed by replacing each missing value with a donor value, that is, a value reported by another person who is known as the donor.

23 For the second type of partial response the data for the persons who did respond are retained and all the data for each missing person are provided by reusing the data of a fully responding person (donor).

24 Imputation using donor records is also applied as an extra non-response adjustment for fully non-responding one person households. Information about the household composition is obtained from the MPS.

25 Donors are selected by matching information on sex, age and labour force characteristics of the person with missing information. As far as possible, the information they provide is an appropriate proxy for the information that is missing. Depending on which values are to be imputed, donors are chosen from the pool of individual records with complete information for

the block of questions where the missing information occurs.

Final sample

26 The sample on which estimates are based, or the final sample, is composed of persons for which all necessary information is available. The information may have been wholly provided at the interview (fully responding persons) or may have been completed through imputation for partially or non-responding persons. The final sample consists of 8,289 income units and includes information for 402 income units which have had all income information imputed for at least one of the persons in the income unit.

NUMBER OF RESPONDING HOUSEHOLDS

	CAPITAL CITY...		BALANCE OF STATE...		TOTAL...	
	Households	Income units	Households	Income units	Households	Income units
NSW	903	1,180	575	696	1,478	1,876
Vic.	967	1,284	416	500	1,383	1,784
Qld	560	718	627	752	1,187	1,470
SA	636	769	219	258	855	1,027
WA	659	839	195	236	854	1,075
Tas.	197	234	278	326	475	560
NT	104	129	-	-	104	129
ACT	301	368	-	-	301	368
Aust.	4,327	5,521	2,310	2,768	6,637	8,289

Weighting

27 Estimates of numbers of persons and income units with particular characteristics are derived from the survey by a complex estimation procedure. This procedure ensures that the survey estimates conform to independently estimated distributions of population characteristics. These estimated population statistics (benchmarks) are specified at both the person and household level.

28 Expansion factors, or weights, are values by which information for the sample is multiplied to produce estimates for the whole population. From this survey, estimates are produced referring to persons, to income units and to households, and the weights are calculated so that each person in an income unit or household has the same weight and that weight is also used for the income unit and household.

29 The SIHC weights are calculated through an iterative procedure. Inputs to this procedure are initial person weights, which are equal to the inverse of the probability of selection for each person in the MPS. This probability is the same for all people in a household. The initial household weight, which is also required, is set to the weight of each person in the household. These weights are adjusted for the probability of selection in the Income Survey. Non-response is accounted for when calibrating to the benchmarks.

Benchmarking

30 The final weight common to the household and the person is then calculated by calibrating to both person and household benchmarks. Person benchmarks are estimates of the number of people in each State and Territory, by age and sex, the number of people in each State and Territory by labour force status and the number of people in each State and

Territory living in the Capital City or the Balance of the State. Household benchmarks for household composition (based on the number of adults and children) are used for each of the States and Territories except Northern Territory where a household count by the number of households in the Capital City and the Balance of the State is used.

31 The person and household benchmarks are based on estimates of numbers of persons and households in Australia. The benchmarks are adjusted to include persons and households residing in private dwellings only and therefore do not, and are not intended to, match estimates of the Australian resident population published in other ABS publications.

Estimation

32 Estimates produced from the survey are usually in the form of averages (e.g. average weekly income of couples with dependent children), or counts (e.g. total number of income units which own their dwelling). For counts, the estimate is obtained by summing the weights of all income units in the required group (e.g. those owning their dwelling). Averages are obtained by adding the weighted income values, and then dividing by the estimated number of income units. For example, average weekly income of couples in which the age of the reference person is 65 and over is the weighted sum of the income of each couple in which the age of the reference person is 65 and over divided by the estimated number of couples in which the age of the reference person is 65 and over.

Reliability of estimates

33 The estimates provided in this publication are subject to two types of error, non-sampling and sampling error.

Non-sampling error

34 This type of error can occur whether the estimates are derived from a sample or from a complete collection. Three major sources of non-sampling error are:

- inability to obtain data from all households included in the sample. Although adjustments are made for non-response bias, some bias may remain. These errors arise because of differences which exist between the characteristics of respondents and non-respondents;
- errors in reporting on the part of both respondents and interviewers. These reporting errors may arise through inappropriate wording of questions, misunderstanding of what data are required, inability or unwillingness to provide accurate information and mistakes in answers to questions; and
- errors arising during processing of the survey data. These processing errors may arise through mistakes in coding and data recording.

35 Non-sampling errors are difficult to measure in any collection. However, every effort is made to minimise these errors. In particular, the effect of the reporting and processing errors described above is minimised by careful questionnaire design, intensive training and supervision of interviewers, asking respondents to refer to records whenever possible and by extensive editing and quality control checking at all stages of data processing.

36 The error due to incomplete response is minimised by:

- call-backs to all initially non-responding households in order to explain the importance of their cooperation to the project; and

- adjustment to the weights allocated to the respondent households in order to allow for households with similar characteristics from which comprehensive data are not obtained.

Sampling error

37 The estimates are based on a sample of possible observations. Hence, they are subject to sampling variability and estimates may differ from the figures that would have been produced if information had been collected for all households. A measure of the sampling error for a given estimate is provided by the standard error expressed as a percentage of the estimate (relative standard error). Further information on sampling error is given in Appendix 3.

ACKNOWLEDGMENT

38 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated: without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the **Census and Statistics Act 1905**.

Related products

39 Users may wish to refer to the following ABS products which relate to income:

- **Household Expenditure Survey, Australia: the Effects of Government Benefits and Taxes on Household Income, 1993-94** (cat. no. 6537.0)
- **Household Expenditure Survey, Australia: User Guide, 1998-99** (cat. no. 6527.0)
- **Household Expenditure Survey, Australia: Summary of Results, 1998-99** (cat. no. 6530.0)
- **Household Expenditure Survey, Australia: Detailed Expenditure Items, 1998-99** (cat. no. 6535.0)
- **Housing Occupancy and Costs, Australia, 1997-98** (cat. no. 4130.0)
- **Income and Housing Costs Survey, Australia: Confidentialised Unit Record File** (cat. no. 6541.0.15.001)-issued annually
- **Labour Force, Australia** (cat. no. 6203.0)-issued monthly
- **Survey of Income and Housing Costs and Amenities: Income Units, Australia, 1990** (cat. no. 6523.0)
- **Survey of Income and Housing Costs, Australia: User Guide, 1997** (cat. no. 6553.0)
- **Average weekly earnings, Australia - Preliminary** (cat. no. 6301.0) - issued quarterly
- **Saunders, Prof. P. 2001, 'Centenary article: Household income and its distribution', Year Book Australia, 2001** (cat. no. 1310.0) pp. 280-295

40 Users may also wish to refer to the following non-ABS products which relate to income:

- **Taxation Statistics 1997-98 - A summary of taxation, superannuation and child support statistics (Australian Taxation Office)**
- **Income Support Customers - A statistical overview, 1999 (Department of Family and Community Services)**

About this Release

ABOUT THIS RELEASE

Previously: Survey of Income and Housing Costs and Amenities: Income Distribution: Income Units, Australia. Released under that title for 1990. Current title used for 1994-95 issues onwards.

Details are presented on the distribution of income in Australia, data on the various characteristics of households (married couple, one parent and one-person units), their composition, and the principal source of income, age and employment status of reference person.

Irregular from 1978-79 to 1990. Annual as from 1994-95. Biannual from 2001.

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